

3/1

Notice of Allowability	Application No.	Applicant(s)	
	10/795,979	KIM ET AL.	
	Examiner	Art Unit	
	Anthony Quash	2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/17/05.
2. ☒ The allowed claim(s) is/are 1-21 and 23-28.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>7/22/05</u> 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>2/6/06</u>. 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____. |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Eugene Lee on 2/16/06.

The application has been amended as follows:

Delete current claim 21 and insert its' place – A method of fabricating an electron beam lithography apparatus, comprising:
preparing a pyroelectric plate; preparing a patterned mask of a semiconductor material, including sequentially forming a semiconductor thin film having a predetermined thickness and a resist on a dielectric plate having the predetermined thickness, patterning the semiconductor thin film using the patterned resist as a mask, and removing the patterned resist, the semiconductor material being sufficiently thick in desired portions to prevent electrons emitted by the pyroelectric plate during heating from being further transmitted; disposing the patterned mask adjacent the surface of the pyroelectric plate; providing a heating source for heating the pyroelectric emitter; and providing a pair of magnets disposed beyond the pyroelectric emitter and the substrate holder,

Art Unit: 2881

respectively, to control paths of electrons emitted by the pyroelectric emitter.—

Cancel claim 22.

Allowable Subject Matter

Claims 1-21,23-28 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance: With respect to independent claims 1 and 11, the prior art of record does not disclose nor teach an electron beam lithography apparatus for providing a one-to-one projection of a pattern, comprising: a pyroelectric emitter, which is disposed a predetermined distance apart from a substrate holder, the pyroelectric emitter including a pyroelectric plate having a dielectric plate on a surface thereof and a patterned semiconductor thin film on the dielectric plate facing the substrate holder, in combination with the remaining aspects of the claims. Since the prior art of record does not disclose nor teach this aspect, independent claims 1, 11, and dependent claims 2-10,12-20, which also incorporate this aspect, are deemed allowable over the prior art of record.

With respect to independent claims 21, the prior art of record does not disclose nor teach a method of fabricating an electron beam lithography apparatus, comprising: preparing a pyroelectric plate; preparing a patterned mask of a semiconductor material, including sequentially forming a semiconductor thin film having a predetermined thickness and a resist on a dielectric plate having the predetermined thickness, patterning the semiconductor

Art Unit: 2881

thin film using the patterned resist as a mask, and removing the patterned resist, disposing the patterned mask adjacent the surface of the pyroelectric plate; providing a heating source for heating the pyroelectric emitter; and providing a pair of magnets disposed beyond the pyroelectric emitter and the substrate holder, respectively, to control paths of electrons emitted by the pyroelectric emitter in combination with the remaining aspects of the claim. Since the prior art of record does not disclose nor teach this aspect, independent claim 21 and dependent claims 23-28, which also incorporate this aspect, are deemed allowable over the prior art of record.

Applicant's arguments, see amendment, filed 8/17/05, with respect to claims 1-20 have been fully considered and are persuasive. The double patenting rejection of office action dated 5/27/05 has been withdrawn.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Quash whose telephone number is (571)-272-2480. The examiner can normally be reached on Monday thru Friday 9 a.m. to 5 p.m..

Art Unit: 2881

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (571)-272-2477. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A. Quash
A.2.
2/16/06

Nikita Wells
NIKITA WELLS
PRIMARY EXAMINER 02/17/06